

*The Development of BeatCred.net*


**An Honors Thesis (HONRS 499)**

**by**

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A handwritten signature in black ink, consisting of a stylized, cursive 'R' followed by a horizontal line.

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## Abstract

BeatCred.net, or simply BeatCred, evolved from a problem I encountered as a music producer. I have spent endless hours producing my songs, but I have only a handful of people to listen. On my own, it was difficult to discern between high quality songs and ones that just sounded good to me. I was constantly seeking constructive criticism, but opinions from friends and family were usually generic or unconstructive. I registered for many music websites and forums with disappointing results. This lack of insightful listeners spawned the idea to create a website specifically catering to feedback, rating, and criticism in the electronic music community. BeatCred allows users to upload and share songs as well as rate and comment on each other's work. I discuss and explain the development of BeatCred from early stages through plans for the future. I explain some of the technical aspects of this site as well as its issues from a business standpoint. Lastly, I reflect on the challenges, rewards and lessons learned through this experience.

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## Acknowledgements

I would like to thank my parents for giving me the motivation to follow dreams and push limits. I would also like to thank my advisor Rui Chen for his invaluable technical advice throughout this project.

### Author's Statement:

I struggled for far too long to decide upon a thesis topic. I wanted to combine all my passions into one glorious project, but most of my initial ideas were unrealistic and farfetched. With my major in Information Systems and minor in Computer Technology, I knew I wanted my project to be technically related. However, I did not want to ignore my interest in music. I also knew that the last thing I wanted to do is write a paper. My ideal project would produce something that I could continue working on after college.

To start generating ideas, I began looking at problems in my life as they related to music. When I was creating songs or DJ'ing, I would analyze problems and think of ways that technology could assist me. Before long, the idea for BeatCred struck me. I was showing a song to my sister, and she was passively listening and giving me comments like "good job" and "that sounds cool". While it was nice to hear, I could not do anything to improve myself as a producer with those words. Then I remembered the initial excitement I had when I first got an insightful comment on an electronic music forum. The site was not widely used and poorly formatted, but every once in a while someone would give you quality feedback on a song. That was where BeatCred came in. What if I could create a community where up and coming producers share their work? I knew at that moment that I would create a website to achieve that as my thesis. The creation of a music website combines my business and technical skillsets and it also involves my passion for music. The title BeatCred was designed to be catchy, descriptive, and give a slightly competitive vibe. Community members would share their music and rate others while providing insightful feedback to boost their feedback reputation.

While the inspiration for this website stemmed from a personal problem, the main motivation to create it was to help others in similar situations. Friends of mine in electronic music production express the same problem: few can honestly critique their songs. Even when friends ask me to listen to their work, I am hesitant to make criticisms to their face. This website helps bring like-minded people together in an open and engaging atmosphere. While there are dozens of music sites for uploading, sharing, and selling music, I have yet to see a well-established song rating website. As the site develops and becomes increasingly functional, it will be interesting to see where this path leads.

The nature of this project is ongoing. After college, I will continue to develop BeatCred. It is often said that a good website never stops developing and I believe this wholeheartedly. I will continue to analyze trends in the music community and do my best to adapt. The success of BeatCred will be measured by how it fares in the online music community. I hope to build a community of happy users and gain webmaster experience. If I can break even financially that will be an added bonus. My ultimate goal is to help distinguish up-and-coming artists. With a formal rating and critique system in place, quality songs can be polished and brought to the surface through the community.

## Future Plans

While the backend development of BeatCred is in place, there are many changes that will take place after my college career. Cosmetically, the site will improve vastly. The pages will become more visually appealing and dynamic. The main focus of my project was getting the core functionality to work properly, but I would like to expand that functionality in the future. While there is only one rating labeled 'overall rating' at the moment, in the future, the user will be able to choose from a number of different criterion to have their songs rated. So in addition to the overall rating of the song, it may be rated on creativity, mixing, and drums based on the user's preference. There will be more interactivity between members down the line. The ability to add friends and send private messages will be added. There will also be the ability to request collaboration on a song. Since you can see what software other members are using and you can hear their music, it will be easy to begin collaborative projects. As the community grows, there will be more of a competitive feel. Top songs of the week will be posted on the homepage. A larger community will also bring about security issues. Greater measures will be taken to protect user data and site integrity. If I am more financially equipped in the future, I will make competitions based on song ratings. For example, the top rated song in a given month would get the chance to perform at a particular venue. Conceptually, BeatCred is very scalable, so as the community grows and becomes more diverse, I will adjust the website accordingly.

## Technical Development

BeatCred was developed using a combination of HTML, CSS, MySQL, jQuery, Javascript, and PHP. Most dynamic functionality is done through PHP and stored in a MySQL database. Items such as the comment box and the media player were coded in jQuery. Coding was done in Adobe Dreamweaver, and images were custom designed using Adobe Fireworks. The site was tested across different browsers and all website data is backed up in a remote location.

## Business Related Issues

While hosting fees and the domain license at the moment are minimal, these costs may increase in the future. Depending on the popularity of the site, an executive team and full time developers may need to be hired in order to maintain site functionality and profitability. Currently, revenue is only based on advertisements alone. An increase in popularity may prompt me to create the option of a premium user. This premium user would pay for access to more features like unlimited upload space or increased website interactivity.

### Challenges, Rewards, and Lessons Learned

The recurring challenge of this website was taking ideas out of thin air and producing something functional. Laying out the website and planning was the hardest stage, since everything was conceptual at that point. There were also technical bumps in the road. Getting stuck coding one particular page for days on end was not uncommon in this experience. Due to the complexity of the code involved, it could be overwhelming at times. I learned to take advantage of my available resources to help me through technical difficulties. Using coding forums, the Internet, and most importantly, my advisor, I was able to create the whole backend and base functionality of BeatCred in one semester. Another challenge was developing the backend. Technically, this was the area I was least familiar with in the development of a website. Backend development essentially means creating a database to support your users. I had to again take concepts and apply them in reality, which could be difficult at times.

One of the biggest rewards of this so far has been gaining technical experience. I have developed dozens of websites throughout the years, but this is the biggest project I have ever embarked upon. It has been exciting to see how my site has progressed and where I can take it in the future. Hearing positive feedback for my ideas from others has also been very encouraging.

While I have gained a vast amount of technical knowledge from this project, the main lessons I learned are regarding organization and time management. To take on such a complex and time consuming project took a lot of mental effort and energy. At first, I did not structure my time very well. I would begin to create a page or a part of the website but I would veer off course and find that three hours had gone by with nothing accomplished. I learned to focus and work towards small goals as time went on. Taking the website piece by piece has been a key in its development.

I hope I learn more and gain from this project in the future. It has been a pleasure to work on and an experience I would trade for nothing.